

Efficiency Vermont Guidelines

Customer-Sited Generation and Combined Heat and Power Projects

Efficiency Vermont shall use the following guidelines to respond to lost-opportunity, customer-initiated or vendor-initiated projects where customer-sited generation including combined heat and power (CHP) is being considered.

- 1) For any customer-sited generation projects that are primarily a substitution for grid-supplied power, Efficiency Vermont will limit its involvement to the provision of limited general information and referral to other sources of information and assistance.
- 2) Efficiency Vermont may assist projects that involve customer-sited generation in the form of CHP if the projects meet the following technical and economic performance criteria. As is the case with all Efficiency Vermont supported projects, the assistance will be limited to the minimum required to complete cost-effective projects.

Technical Criteria

- a) Only those CHP projects that achieve a high level of overall efficiency (including both heat and power generation efficiency, and including utilization of thermal output) will be supported. Systems must meet the following criteria:
 - i) The design system efficiency must be at least 65 percent, with a minimum 13 percent of the system output as electricity and a minimum 20 percent as useful thermal energy.¹
 - ii) Meet the EPA Energy Star CHP requirement that the system “reduce emissions and use at least 5 percent less fuel than comparable, state-of-the-art, separate heat and power generation.”²
 - iii) Meet air quality standards established by the Agency of Natural Resources.
- b) The electrical output of such systems on a net annual basis shall not exceed the planned annual electric energy use of the customer where the project is sited.
- c) Any projects with nominal generation capacity over 500 kW require DPS approval before Efficiency Vermont resources are applied.

Economic Performance Criteria

- a) Project screening will be based on the same PSB-approved principles and methods currently used by Efficiency Vermont for efficiency measures. Cost-benefit analysis must show net benefits to both society and the customer. In

¹ These criteria are based on the SPEED program in Section 8002 of Title 30, <http://www.leg.state.vt.us/statutes/fullsection.cfm?Title=30&Chapter=089&Section=08002>

² <http://epa.gov/chp/public-recognition/awards.html>

addition, to ensure effective use of ratepayer funds, electric benefits alone must be greater than Efficiency Vermont's expenditure of electric ratepayer dollars.

b) The host DU shall be noticed prior to calculating the cost-benefit analyses.

c) The following factors will be considered in the cost-benefit analysis:

Costs

- i) Electric ratepayer funds (Efficiency Vermont expenditures for both the provision of assistance and incentives)
- ii) Customer share of cost
- iii) Any other grants or third-party funding for system installation
- iv) Fuel (avoided costs to be used for societal analysis, retail costs to be used for customer analysis) including any change as a result of rate reclassification
- v) For customer-screening, any electric rate reclassification or standby charges from utility
- vi) Operations and maintenance costs
- vii) Accounting for any early retirement of existing equipment

Benefits

- i) Electric energy and demand savings, adjusted for availability (avoided electric costs to be used for societal analysis, retail costs to be used for customer analysis).
- ii) Thermal savings (avoided thermal costs to be used for societal analysis, retail costs to be used for customer analysis).
- iii) In societal screening the 10% risk adjustment shall be applied as an increase in benefits.

Any other verifiable costs or benefits that are directly attributable to serving or the successful operation of the CHP system. The value of said costs or benefits shall be identified by Efficiency Vermont.

- 3) There are likely to be choices to be made in any CHP scenario. Efficiency Vermont shall seek to identify and encourage the options that provide the greatest net societal benefits. This would include supporting systems with higher overall efficiency than might otherwise be installed.
- 4) Customers will be encouraged to pursue any available funding or technical assistance from other sources.
- 5) Efficiency Vermont resources will focus primarily on the provision of technical assistance although incentive funds may also be provided to customers. Projects in geographically targeted areas and/or with significant electric system benefits shall have priority. Prior to providing an incentive in excess of \$XX,XXX or cumulative

incentives during a year of over \$XXX,XXX Efficiency Vermont shall provide notice and an opportunity for comment to the DPS, the host DU and the Contract Administrator("the parties"). Before proceeding with the project, Efficiency Vermont shall address the comments and inform the parties of its decision.

- 6) A new cost code will be used to track time spent by Efficiency Vermont staff on CHP. Early in any CHP project, an estimate of required time will be made for budgeting and determination of project viability.
- 7) There may be certain additional circumstances where Efficiency Vermont projects that include customer-sited generation should be pursued on a case-by-case basis. For example, where the fuel source is a waste gas (e.g. methane) that would otherwise contribute to Vermont's greenhouse gas emissions. In these circumstances, Efficiency Vermont should compare various options (e.g. direct combustion for application to thermal loads vs. reducing customer load through electric generation vs. cogeneration) and assess them from the perspective of societal net benefits. Before proceeding with these projects, Efficiency Vermont shall provide notice and an opportunity for comment to the DPS, the host DU and the Contract Administrator. Efficiency Vermont shall address the comments and inform the parties of its decision, prior to providing further assistance to these projects.
- 8) Efficiency Vermont shall report on any CHP activities in its regular quarterly and annual reports submitted to the PSB.